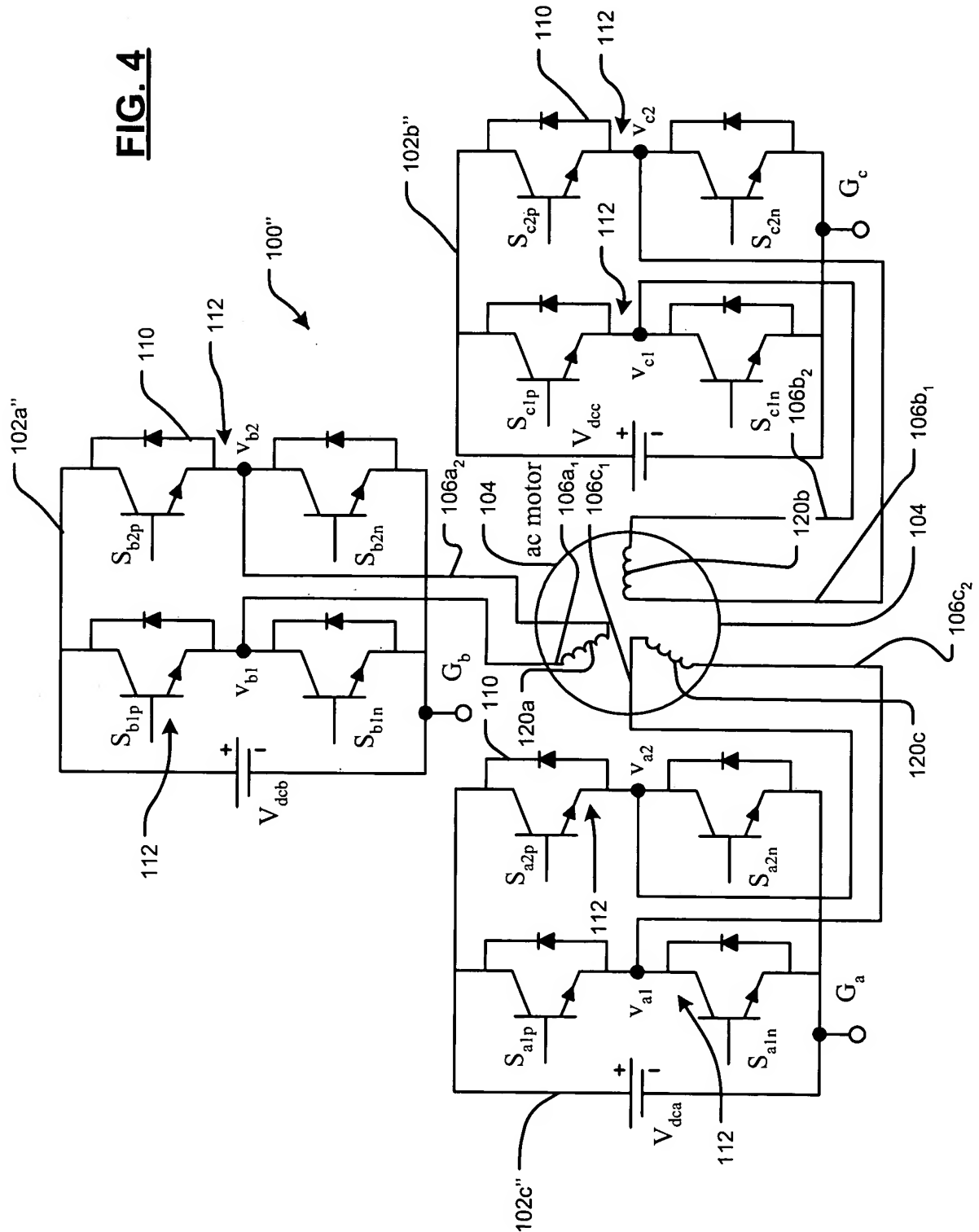


FIG. 2

FIG. 4



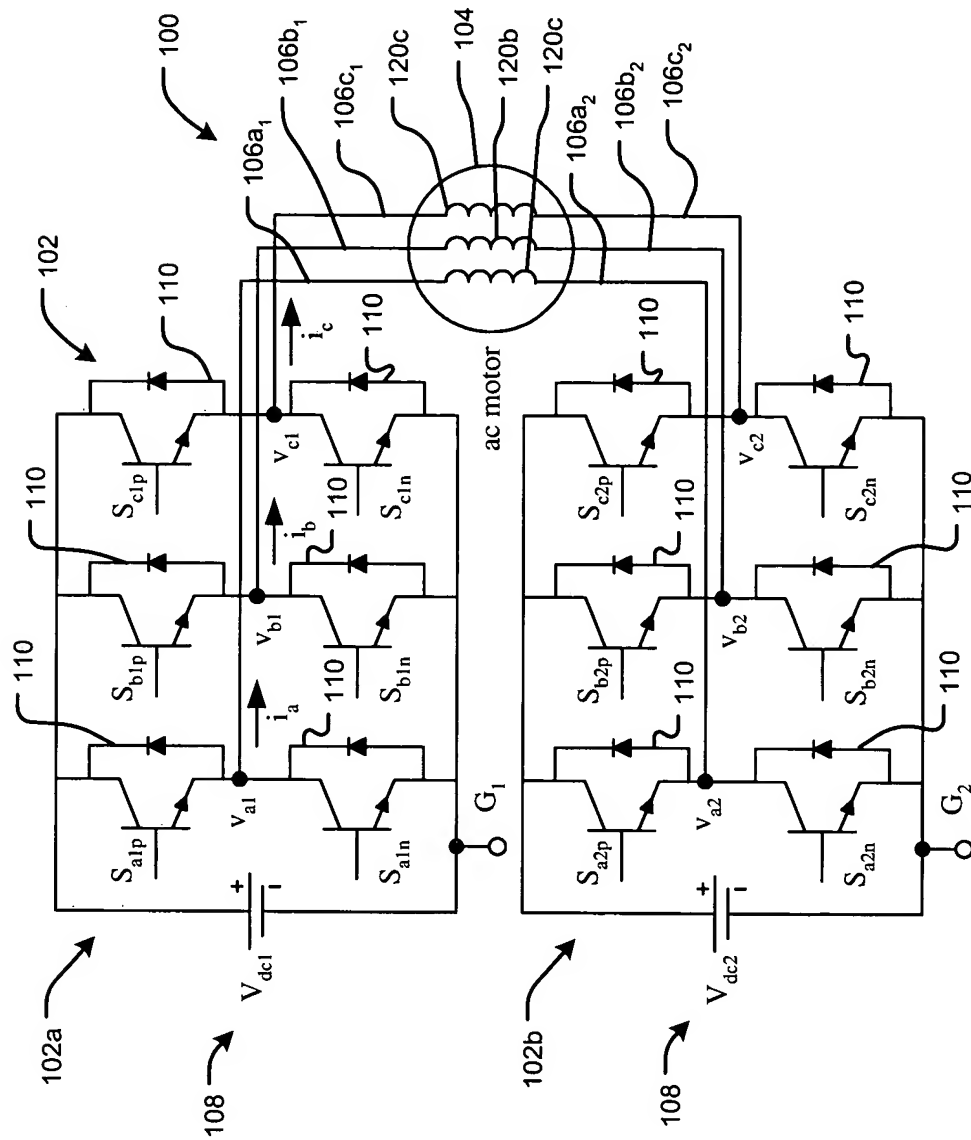


FIG. 5

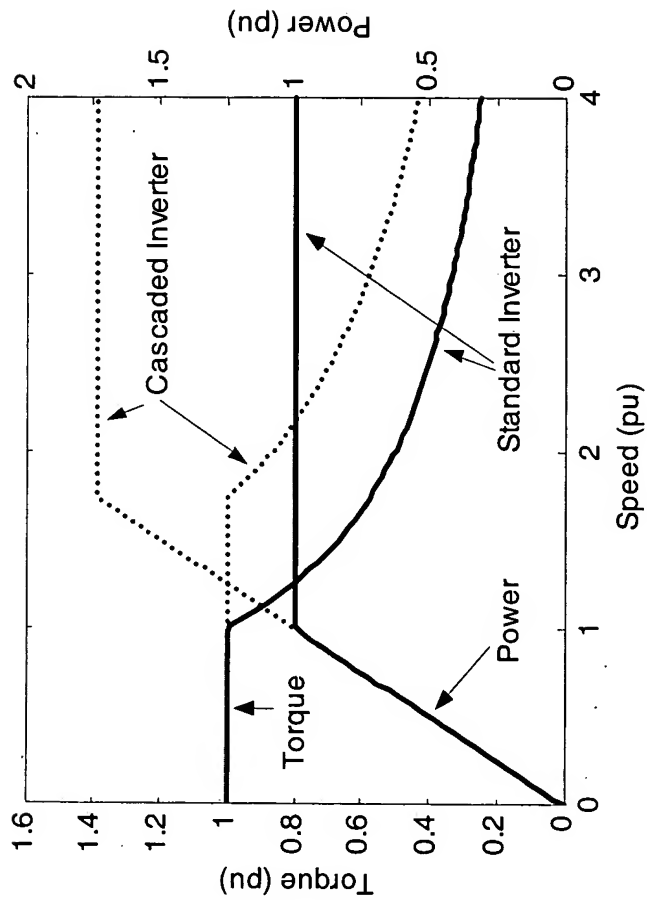


FIG. 6

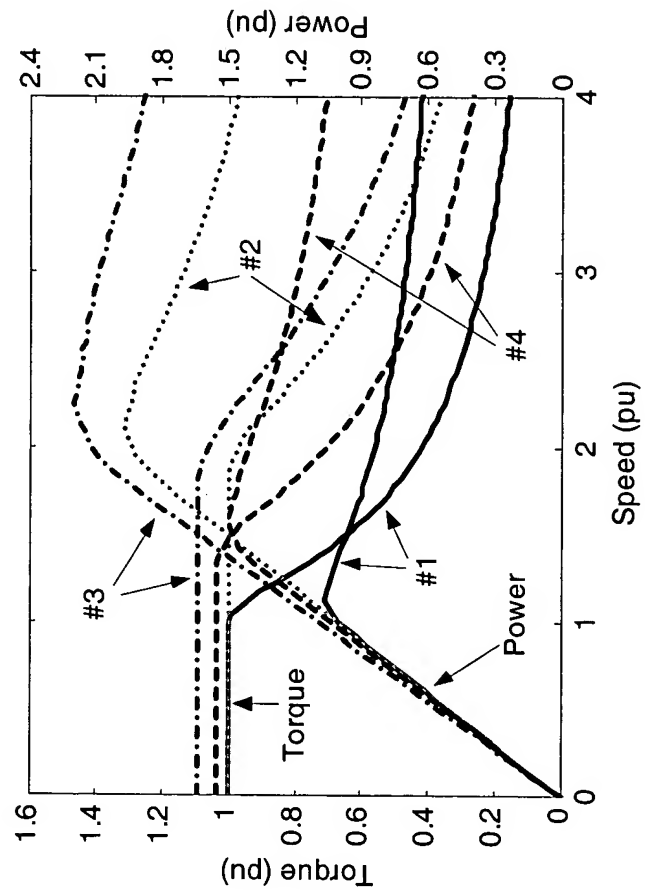


FIG. 7

TABLE I
SYSTEM RATINGS FOR VARIOUS INVERTER CAPACITIES AND IPM MOTOR CONFIGURATIONS

Configuration	Turns Ratio (pu)	Rated I (pu)	Magnet Flux (pu)	Corner Speed (rpm)	Torque at Corner (Nm)	P at Corner Speed (kW)	P at 3000 rpm (kW)	Inv. Switch kVA (pu)
Standard Inv. with Standard Motor. Case #1	1	1	1	700	155	10.1	7.0	1.00
Cascaded Inv. with Adj. Turns Ratio Motor. Case #1	$\sqrt{3}$	$1/\sqrt{3}$	1	700	155	10.1	7.0	1.15
Cascaded Inv. with Standard Motor. Case #2	1	1	1	1300	155	21.1	16.1	2.00
Cascaded Inv. with Maximum Flux Motor. Case #3	1	1	$\sqrt{3}$	1300	170	23.1	21.0	2.00
Cascaded Inverter with Increased Flux and Adjusted Turns Ratio Motor. Case #4	$N = 4/3$	$1/N$	$\sqrt{3}/N$	940	161	15.9	11.8	1.50

FIG. 8

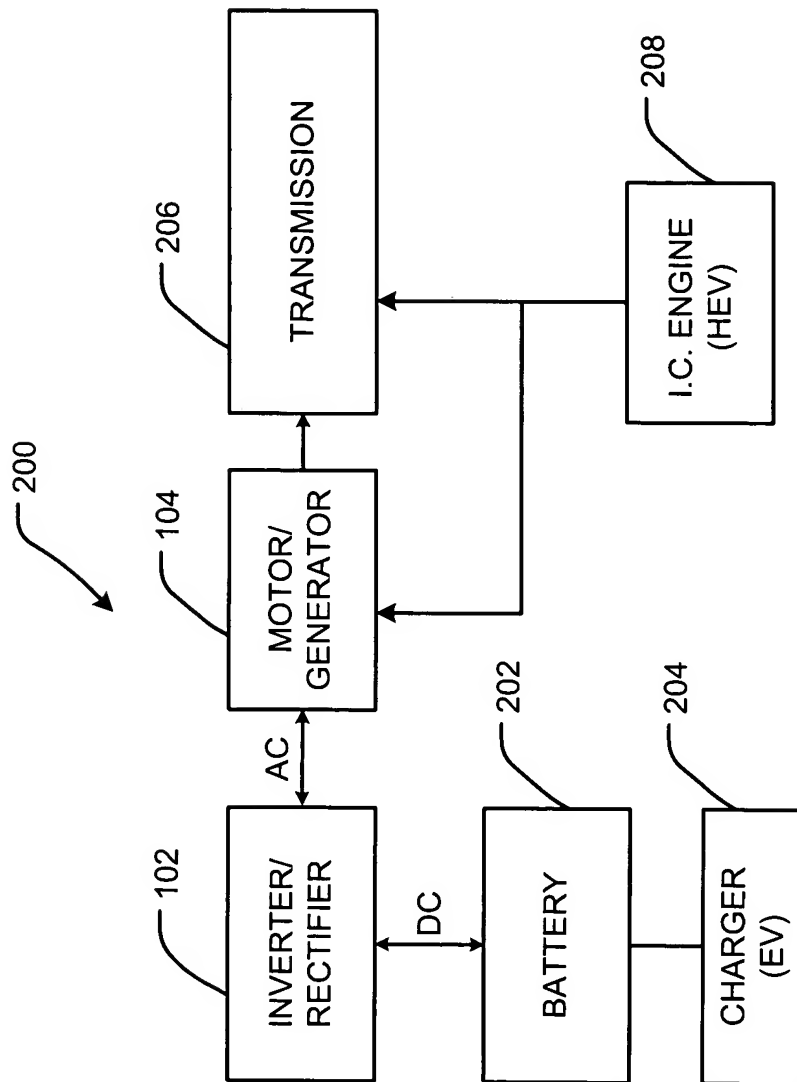


FIG. 9